Rio 4K/8K

Rio Assist

V 4.5.4

Release Notes

Version History

Document Name: **Rio Release Notes V4.5.4**

Version	Description	Date	Author
1	Rio 4K/8K V4.5.3 Release	8th October 2018	HGP
2	Rio 4K/8K V4.5.4 Release	20th December 2018	INS

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Any problems with install or operation of this software should be reported to the Grass Valley Support Department where a representative will assist with the issue.

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Software Release Details

Release Description	V4.5.4 is a bug fix release for Quantel Rio 8K, 4K & 2K, Rio Assist and Quantel Rio Connect only.
Release Type	Bug Fix release
Customer	*n/a*
This version	V 4.5.4
Release Date	20th December 2018
Other Notes	**System Drivers – Please note that the Sentinel Driver v7.5.9 is required to use Windows 10** https://sentinel.gemalto.com/sentinel-drivers/ Note the Version required, USB only no need to install parallel: **Base, Desk and Dict folders are compatible with V4.3.0 and V3.1 rev 1.** This database schema is NOT compatible with V3.0 rev 1 or earlier.

Release Scope & Supported Products

	System Component
✔	Quantel Rio 2K
✔	Quantel Rio 4K
✔	Quantel Rio 8K
✔	Rio Assist
✔	Rio Gateway
✔	Neo Workstation Server

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Product Overview

The Rio range offers a choice of software or turnkey high quality editing, colour and finishing systems running on standard PC hardware. The Rio range provides SD, HD, 2K, 4K, 6K, 8k stereo3D and high-frame rate support.

The comprehensive integrated toolset includes conform, colour, editing, effects, text, paint and multi-format versioning enabling Rios to complete a wide range of post production tasks. Quantel Rio efficiently handles today's digital capture formats such as RED, XAVC, Sony F65, SStP, ARRI, Canon, Apple ProRes and easily integrates Into data-centric post pipelines.

A Rio 4K offers a wide range of configuration choices

- Available as software only or as a turnkey solution with various options
- Storage architecture – local workspace, SAN, NAS or a combination
- Support for up to 1 or 2 Tesla P100 GPUs
- Grading control surface - Neo, Neo Nano or no panel at all
- File and Video workflow

Key Features

- Dolby Vision Support
- Production Compression Codec
- Runs on commercial off the shelf (COTS) hardware
- Supports HDR and native colour space media (providing wider colour gamuts) with 32-bit floating-point or 16-bit half-float processing
- Uses Nvidia Maximus multi-GPU technology for maximum interactive performance
- Includes Edit, MLTFX, Effects (including Paint), Utilities and Scribe modules
- Real-time interactive operation on images up to 6K 16 bit and beyond

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Installation

Windows 7 or Windows 10 64bit is required to run this software. An engineer may be required to do this upgrade.

You will need to run the installation program, setup.exe, and the software as administrator.

Required software

Name	Description
DirectX 11	x64 application requires DirectX 11 to be installed… the installer will install if the system is found to be running an earlier version of DirectX
Internet Explorer 8	Internet Explorer 8 or later (even if not network connected) needs to be installed or else the software will not run up
QuickTime 7 Essentials	**QuickTime 7 Essentials needs to be installed for .MOV file support**
Windows Media 11	Windows Media 11 or later needs to be installed
DotNet 3.5	Windows .Net Framework 3.5 or Later
Adobe Acrobat Reader	Adobe Acrobat Reader V6.0 or Later

Associated or optional software

Name	Description	Version
Dolby Vision CMU	Dolby Vision external unit	2.6 or later
Neo Workstations Server	GV software for Neo/Nano Workstation PC (Win7)	V4.5.3
Media Transformer	'deliver to' connectivity for sQ server systems	V5.4 rev 5
edlaaf.exe	CMX 3600 list convertor to AAF	V54.0
aaf2edl.exe	AAF list convertor to CMX 3600 format	V2.14
nclaaf.exe	Negative Cut List convertor to AAF	V10.0
stlaaf.exe	Subtitle List Convertor to AAF	V3.0
XMLDir.exe	QXMLNet clip bin query utility	X5.4.0
XMLTool.exe	QXMLNet clip combining utility	X5.4.0
XMLPut.exe	QXMLNet clip import utility	X5.4.0
XMLGet.exe	QXMLNet clip export utility	X5.4.0
XMLArchIn.exe	QXMLNet archive in utility	X5.4.0
XMLArchOut.exe	QXMLNet archive out utility	X5.4.0

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Driver Requirements (minimum)

Name	Description
Sentinel Driver nVidia Tesla driver (P series)	**v7.5.9** **385.08**-tesla-desktop-win10-64bit-international-whql
nVidia Tesla driver (K series)	**385.08**-tesla-desktop-win8-win7-64bit-international-whql **385.08**-tesla-desktop-win10-64bit-international-whql
nVidia Geforce GTX driver	**385.41**-desktop-win8-win7-64bit-international-whql **385.41**-desktop-win10-64bit-international-whql
nVidia Quadro driver (Quadro and M series)	**377.55**-quadro-grid-desktop-notebook-win8-win7-64bit-international-whql **377.55**-quadro-grid-desktop-notebook-win10-64bit-international-whql
AJA Corvid Ultra driver	ntv4driver-2.5.0.253.msi , Firmware v65
AJA Kona 3G driver	ntv2driver-12.3.7.85.msi, Firmware v124
AJA Kona 4 driver	ntv2driver-12.3.7.85.msi, Firmware v44
AJA Corvid 88 driver (4k Rio)	**ntv2driver-12.1.4.146.msi, Firmware v25 (from v3.1 rev 1 installer)**
AJA Corvid 88 driver (8k Rio)	**ntv2driver-12.1.4.146.msi, Firmware v25 (from v3.1 rev 1 installer)**
eVidIO2 card driver	v17
PCi QLink driver	3.3.0.0
Wacom Intuos 5 driver	WacomTablet_6.3.9w3.exe
Serial Card (VTR) driver	CDM 2.06.00 WHQL Certified.zip
RED Rocket-One driver	RED driver 2.1.23.0, Firmware 1.1.18.0
Red Rocket-X driver	RED driver 2.1.31.0, Firmware 1.4.1.16

IMPORTANT: On boot of the Rio software the user will be prompted to update the AJA output device driver and firmware (if it has not already been done).

Driver and matched Firmware for each software build can be found in…
C:\Data\ {Product}\DLL_Data\Quantel\AVIO3PCardDriver
Install instructions for Driver and Firmware can be found in the above folder (readme.txt)…

Note: Corvid 88 Driver ntv2driver-12.3.7.85 and Firmware v32 has an issue with horizontal line noise - GENQ-22773

Therefore we advise that all Corvid 88 installations are DOWNGRADED to Driver ntv2driver-12.1.4.146 and Firmware v25.
The above 'downgrade' version is not included in V 4.5.3 software.
Driver and firmware must been installed from V 3.1 or V 3.0 software.
(this issue ONLY affects AJA Corvid 88 hardware)

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Minimum PC Specification

Please see the **Pablo Rio SW Installation Guide 2140-57-010** document for the latest hardware recommendations.

Please see the **Pablo PA Installation & User Guide 2140-57-016** document for the latest hardware recommendations.

License

A V4 license will be required for this release.

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Important Information

Quicktime Vulnerability Issues

The current Grass Valley editing/finishing products that may be affected are Rio, Qube, sQ Edit, sQ Cut (with I/O), QTube Edit and Marco.

Also The broadcast products sQ EditX, sQ CutX (with I/O), Live Touch Client, sQ Play and sQ Record.

All of these have an I/O menu that support the import/soft mount of Quicktime files using the Quicktime codecs.

To enable this support the end user needs to have accepted the end user license agreement and installed the Quicktime player.

Grass Valley are currently researching an alternative to having the Quicktime installed and will have an alternative solution for IBC.

In the interim for current systems it is recommended that Quicktime is re-installed with only the Quicktime Essentials selected.

This will minimise the Quicktime player vulnerability, but will not eliminate it.

For new installations where the ability to import Quicktime files is still required then only the Quicktime Essentials should be selected from the installer.

For further information please contact the Grass Valley Support Department
https://www.grassvalley.com/support/sam/

Support for Maxwell “M” and Pascal “P” CUDA cards

V4.3.0 adds support for Maxwell “M” & Pascal “P” CUDA cards.

Neo and Neo Nano workstation software

The installable package includes Neo Workstation software for completeness.
No Update to Neo Workstation software is required when upgrading from V2.1 rev 4 to V4.5.3

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Base Compatibility

Base, Desk and Dict folders are compatible with V3.1 rev 1.

V3.1 rev 1 was a major release and requires a database schema change. After installation the first run up will migrate the base, desk and dict folders automatically creating a back-up of the original ones.

NOTE : v4.5.3 compressed clips are not backwardly compatible with V 4.4 or earlier versions. A compressed clip becomes UNDEFINED and displays as noise with V4.4 or earlier versions.

NOTE : RAW colour space causes some clips to be tagged as 'raw', this becomes 'unknown' if the database is used in V4.0.0 or V3.1 rev 1. For this reason V4.3.0 will copy the V4.0.0 database and then update it to use 'raw' colour space leaving a copy of the V4.0.0 database if the user wishes to down grade.

Note.
1) ONLY NEW material will be updated to use 'raw' colour space (if applicable)
2) Any new / modified material will not be in the copied database.

NOTE : This new database schema is not back compatible with V3.0 rev 1 or V2.1 rev 4

NOTE : v4.4.0 colour settings are not back compatible with V 4.3 or earlier versions

Archive Compatibility

Existing archives from V 2.1 or earlier software versions will come in as "raw video" or "raw log" and use 'source colour processing' as the default. To maintain existing compatibility clips should be viewed on output and rendered at "raw video" or Rec709 and 2.2 gamma.

Render Compatibility

Due to improvements in the colour cube processing, 2.1 archives and migrated base settings will render with a subtlety different result.

Associated documentation

Rio v4.5 - New Features_Rev B.pdf

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Changes this Release

Issues Resolved in V4.5.3 to V4.5.4

- GENQ-24118 - Use f1 setting DMin to set black level for areas revealed by DVE for log formats
- GENQ-23075 fix - Picture not changing when Input Cascade changed. Reset tile xRef cache.
- GENQ-23870:Fix:GenerationQ software unable to read Dongle locking code
- Update to Safenet Sentinel Version 9.4.
- GENQ-22777 - added new option to allow user to set which axis to apply tracking to
- GENQ-22774 - fix Paint cutouts functionality when changing cutout via numeric id being the wrong way round when 'only' is off/on
- GENQ-21404:fix:DNxHR mxf imported has corruption .Added 10bit profile handling across all dnxhr formats

Issues Resolved in V4.4.15 to V4.5.3

- GENQ-23836 CUDA Out of Memory CRASH
- GENQ-24077 F1, user guide is disappeared in F1
- GENQ-23206 I/O Export, crash happens by export empty audio track as prores
- GENQ-22348 Edit, Desktop, cannot change input channel with 32ch audio
- GENQ-23374 Export, DNxHR codec list says '1920x1080' regardless source clip resolution
- GENQ-23362 UI, Edit, "FX loop" tip appears on VO icon
- GENQ-23241 UI, V1 box overlaps on fps box by show blue bar on desktop clip

Issues Resolved in V4.4.1 to V4.5.3

- GENQ-23120 Respeed, crash happens by render HD clip with Alchemist
- GENQ-22751 conform of AVID media not getting all audio tracks
- GENQ-22093 I/O Conform, crash happens by re-conform after edit
- GENQ-22029 Respeed, Alchemist rendering speed with SHV clip is too slow
- GENQ-22327 Fix DPX import 2880x1620 RGB
- GENQ-21346 Rio software does not automatically eject tape during a multi-tape conform
- GENQ-23099 Plenty of stuffer process event appear during playout
- GENQ-23069 DPX import crash
- GENQ-22824 Cine-expand memory issue
- GENQ-22929 Utility Average get dark as step value gain
- GenQ-22794 LUT buffer read error
- GenQ-23270 DPX import has corruption in random frames
- GENQ-23209 I/O Import, imported 1998x1080 sized dpx becomes noise
- GENQ-23202 Crash exporting video-only clips as ProRes - problem can cause the mov export to try and make audio on a video-only clip
- GENQ-23153 Scrolling message in log ' setPlaneFormat '
- GENQ-22769 GenQ Fails to Boot on Windows10. Some upgraded Windows 7 machines are missing OpenCL and OpenGL32 dlls.
- GENQ-23083 TCC detection removed
- GENQ-22755 VDS Synapse plugin Sapphire disappear

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- GENQ-22561 Rio8K : rendering stop and freeze
- GENQ-22577 VV4.4 Conform picks only audio source Ch1 against all 8 audio channels - PremierePro 11.0.2 aaf
- GENQ-22802 When export materials that originaly Arri Alexa, the exported DPX files has a source timecode plus 40 hours (+40H)
- GENQ-22891 Audio only respeed maths wrong changing process
- GENQ-22838 Audio only stretch doesn't render
- GENQ-22898 Re-speed, audio re-speed process more than 200% never stops
- GENQ-22899 Re-speed, extra boxes of audio re-speed settings are not appeared
- GENQ-22734 Out of Process plugins not recognized on startup
- GENQ-19911 Rio 8k, I/O Record, cursor response is too heavy for select audio channels
- GENQ-22499 I/O Conform, error "no clip found to conform" appears when need to record next reel
- GENQ-20477 Adjusting Garbage Matte Keyframes Sluggish
- GENQ-22739 DPX RGB export drop in quality
- GENQ-22826 DCP out with colour space selection on output as per export (such DCI XYZ colour space.)
- GENQ-22773 RIO 8K Random Line noise
- GENQ-21243 Add Clarity to Audio Timeline
- GENQ-21572 Intermittent Crash rendering on Windows 10
- GENQ-21517 Rendering crash on Windows 10
- GENQ-22788 CUDA working with GTX Pascal cards
- GENQ-22732 Crash swapping close captions to empty Edit time line
- GENQ-22619 YUV legal , preview update when in source mod
- GENQ-22682 Editing a floating clip to timeline resets scrollbar offsets
- GENQ-22608 RIO 8K, Avoid double quad split, wait for msg to finish
- GENQ-22703 RIO 8k , Incorrect Audio heard at Beginning of play
- GENQ-22582. Edit, highlighted audio track box is not reset when a new clip is loaded on timeline
- GENQ-22610 Colour, added a registry setting to disable the automatic migration from "YUV legal" to "Soft Clip"
- GENQ-21465 Supporting rendering of multiple clips and variation in clip length in
- GENQ-20152 32 Mono audio tracks. I/O Record, audio assign goes wrong with preset 32-2 when re-entry to record menu
- GENQ-22621. Edit, crash happens by press Track Visibility with 3 frames timeline
- GENQ-22618. Edit, crash happens by close Audio Track Visibility with 1 frame timeline
- GENQ-22573 LUTs, re-implement support for SpeedGrade .look files
- GENQ-22604/GENQ-22597 Edit, enable box of Audio Track visibility is turned on by clear timeline after tick audio track off
- GENQ-22601. 32 mono audio tracks: LED state is not on when restarting with hidden tracks. Synch the LED state
- GENQ-22594/GENQ-22595 Edit, Desktop, loop crash happens by hide track on desktop clip and press add video on timeline after modify Audio Track Visibility
- GENQ-22591 MLT FX Tracker, 3-D setting goes back to Affine after restart
- GENQ-22585. Edit, highlighted track is still active after hide.
- GENQ-22587 MLT FX Tracker, red messages appear in a log by Mocha tracking
- GENQ-22566 Cloud tracker: cloud and optical flow always defaults to affine.
- GENQ-22562 MLT FX Tracker, many red messages appear in a log by tracking. Make the logging conditional on log category

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- GENQ-22537 Cloud Tracker GPU crash with RGB 8bit clip "(raw video)" + Source Colour processing
- GENQ-22646 MLT Tracker: delete homograph key frames deletes all key frames when only in or out is marked
- GENQ-21647 Support for third-party LUT formats
- GENQ-22758 Settings, "Replace Pan & Scan with DVE" appears in Settings Option page
- GENQ-21945 Imported WMV has wrong colours
- GENQ-21796 I/O Import, imported wmv clip becomes green and magenta
- GENQ-22061 Colour palette not working in Scribe
- GENQ-21339 MLT FX Colour, curve point has time lag to start moving
- GENQ-21241 3d stereo, muted enable box is brighter
- GENQ-21409 MLT FX Plug-ins, Sapphire rendering speed becomes slower than V 4.0.0
- GENQ-20198 I/O Import, soft mounted F55 clip colour becomes wrong by change colour space
- GENQ-20196 I/O Import, Loaded F55/F65 file colour is wrong
- GENQ-20792 Mute track using the Neo panel is not working
- Paint, Only supports over-range values for integer based clips
- GENQ-21701 Chroma level not change when Black/White is changed on YUV clip.
- GENQ-22176 C700 canon Raw not importing
- GENQ-21881 Tracker _ Offset when tracking different canvas size set
- GENQ-22315 Colour, lift control is too sensitive when render format is set to Hybrid Log-Gamma
- GENQ-21209 I/O conform, converting failed to aaf when 1st event's duration is 0
- GENQ-22311 Cineon Log curve does not match Nuke
- GENQ-21397 Playout to Tape stop from 59.94i/59.94p to 29.97i
- GENQ-22136 Cadence of 2-3 pulldown is wrong with Corvid88 installed machine.
- GENQ-22516 I/O Export, exported input key is white as prores 4444
- GENQ-22280 Khuna SWS files import for UHD resolution
- GENQ-22180 Closed caption export errors in CEA708 stream
- GENQ-22291 SCC/MCC caption files ignore changed frame rate
- GENQ-20229 MXF soft mount ignores colour space set in import menu
- GENQ-21368 Softmount Quicktime files missing a number of Audio channels
- GENQ-15006 Improvement: MLT FX, straight shape point becomes curve after adjusting points.
- GenQ-22066 Mute & Solo keyboard shortcuts don't work in MLT
- GenQ-22065 Wire frame does not zoom with picture.
- GENQ-22141 Edit, transition image issue
- GENQ-21700 Twixtor and Neat video plugin issues
- GENQ-21843 RED 6.2.2 SDK Update
- GENQ-21916 IO, Import customer supplied MXF, vertical lines seen on clip
- GENQ-21821 Closed Captions Errors on export
- GENQ-22067 Neo Nano Crash on loading shape pre-sets
- GENQ-21539 59.94fps Video lost sync on playout of long clip
- GENQ-21208 Force Cadence of audio to use the same 5 frame cadence from start of the clip
- GENQ-21843 Red Weapon Helium import
- GENQ-21853 LUT applied with Evidio card on YUV output corrected.
- GENQ-20865 Neo, solo/mute button doesn't work correctly to V2 or upper tracks
- GENQ-21604 MLT colour muted cascade layers switched on incorrectly when software upgraded
- GENQ-21751 Matinee crash

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- GENQ-21568 QCIFS disables the SMB on Windows 10 system
- GENQ-21857 Un-rendered segments pre V3.1 rev 11 p11 have different colour look once upgraded to V4.3. Colour settings now as previous version if once set.
- GENQ-21850 Printer lights not functioning in Raw Log
- GENQ-21872 RIO 8K mulit out ignores SDI colour space
- GENQ-21848 CTRL M shortcut toggle between MLT and Edit
- GENQ-21577 CDL is not applied in the correct colour space when in float processing modes
- GENQ-21463 MLT Colour, interlaced clips are corrupt when rendered with float processing
- GENQ-21082 Stereo 3D Anaglyph mode display incorrectly with VG enabled.
- GENQ-18674 Conform R3D - filter by R3D rather than all doesn't link to files correctly.
- GENQ-21704 Blend modes functioning with Floating-point clips
- GENQ-21739 EXR export respecting trim sizes.
- GENQ-21759 ProRes export. Re-order tracks so that timecode track is last.
- GENQ-19827 ProRes export, support for splitting audio into multiple mono tracks
- GENQ-21624 MLT FX Graphics, tracked curve by Mocha doesn't move with Linear method
- GENQ-21632 MLT FX Tracker, no target point on image by quick tracking with line
- GENQ-21625 MLT FX Colour, Repeated tracking causes offset to ellipse
- GENQ-21624 I/O, Import, loading DNxHD file cause crash
- GENQ-21071 Clips bin, folder tree display becomes strange with browse mode
- GENQ-21610 Closed captions fails to export because "more frames needed"
- GENQ-21125 Phantom Flex 4k import (New SDK)
- GENQ-21503 Colour shift when using flowmotion effects
- GENQ-21595 / GENQ-21598 MLT Tracker data of shape has offset when using storyboard settings
- GENQ-21623 MLT tracker possible crash
- GENQ-21529 New UI – Text missing from conform menu
- GENQ-21289 EvidIO card look different on output with some media.
- GENQ-21527 Crash on Rio Connect on sharing Raw files
- GENQ 20981 MLT pre-process make cube not functioning
- GENQ-21546 Ability to delete homography key frames in MLT tracker
- GENQ-21550 MLT FX Graphics, gradient rectangle with linear becomes black
- GENQ-21263 EvidIO crop issue with non REC709 clips
- GENQ-21561 MLT FX Tracker , crash with Delete KF all
- GENQ-21562 MLT FX Tracker , tracking data becomes empty loading a clip with track data
- GENQ-21485 DCP speed increase on import
- GENQ-21580 Tracker , old data seen after deletion
- GENQ-21579 MLT FX , Pre-process added not incrementing process number
- GENQ-21590 MLT FX, copied shape is created underneath by shift + drag
- GENQ-21589 2nd shape quick tracking not starting correctly.
- GENQ-21543 Cannot restore old Archives.
- GENQ-21804 I/O Import, soft mounted DNxHD becomes 3d stereo clip.
- GENQ-19041 Conforming wrong with audio track when change audio tracks like mix down at offline edit.
- GENQ-21673 Keyframe graph and solo button and pick button are disappeared in Effect menu.
- GENQ-22386 MLT Colour, registry setting "Limit Cube Size" to reduce size of Make Cube to x33 or x17
- GENQ-22388 DCP Out, Annotation set - Not set due to space in text
- GENQ-19876 System, image becomes low contrast by 0-1023 with sdi multi out

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- GENQ-22381 System, SDI Multi output range becomes wrong when you change colour space

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Known Issues and limitations

Limitations of compression

- Support progressive only
- Support Integer only
- Support HD or bigger size clip only
- Not support recording SDI Multi In 7680x4320 or bigger sized clip in I/O Record
- Import speed can be slower than uncomp
- Rendering speed can be slower than uncomp
- Playout speed of unrendered clip can be slower than uncomp
- Cannot guarantee realtime playout, if clip and SDI output format doesn't match (resolution or colour format, it means mixed resolution timeline as well)
- Cannot guarantee realtime playout with SDI lut or Pan&Scan
- Cannot guarantee realtime playout with Loop/Bounce mode in MLT FX
- Yellow image appears when decoding process failed
  By importing process is aborted, aborted area of clip has yellow frames
- Cannot guarantee rendering to compression depending on CUDA cards. Sometimes crash happens, or yellow frame is generated.
  Rio 4k with K20 x2, Alchemist GPU Usage is required to select "CPU Only" for UHD size rendering.
  Rio 8k with K80 x6, Alchemist GPU Usage is required to select "CPU Only" for SHV size rendering.
  When you need to use Alchemist, please change "Shared GPU" or "Dedicated GPU"
- GUI image has 3 frames skip during recording UHD or bigger sized clip

Known issues

- GENQ-24059 Rolo compression, playout rendered result as compression is stutter sometimes after rendering
- GENQ-24057 Rolo compression, wipe transition clip to blank as compression has yellow frames
- GENQ-23399 Neo, preset settings of Dolby Vision are vanished after restart
- GENQ-24056 I/O Record, crash happens by select 25fps with 29.97fps SDI inout
- GENQ-24098 I/O Import, crash happens by localise F65 debayer quality high as 2:1 comp with K20
- GENQ-24018 I/O Conform, conformed clip is empty by imported rushes
- GENQ-23301 Utility, over 20 value of Average or Integrate becomes black
- GENQ-23305 Empty segment exists with other frames in the clip (ghost image)
- GENQ-23085 System, crash happens by nvoglv64.DLL caused a EXCEPTION_ACCESS_VIOLATION during start up
- GENQ-22740 I/O Export, audio mixdown on/off of prores works opposite
- GENQ-21341 MLT FX Colour, colour is changed slightly between YUV and RGB with Rec.2020
- GENQ-22423 System, installer, disk space doesn't match to Rio software
- GENQ-22405 I/O Import, Imported 119.88fp clip doesn't have set source TC
- GENQ-22020 MLT FX, realtime indicator tells lie
- GENQ-22355 MLT FX Colour, colour result has magenta cast with YUV raw + graphics on blank V2
- GENQ-22362 MLT FX, wrong colour is shown when you change transfer curve in render format
- GENQ-22348 Edit, Desktop, cannot change input channel with 32ch audio
- GENQ-22314 MLT FX, Edit, converted colour result has different chroma level between MLT FX and SDI output
- GENQ-22302 MLT FX, result colour is changed after rendering with source colour processing + DVE

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- GENQ-20164 I/O Conform, conform failed by source tc start 00:00:00:00 audio with grey
- GENQ-22488 I/O Export, exported mov file colour is wrong with Avid and Graphic codec
- GENQ-22503 Tangent Panel, highlight display of saved preset is turned off after restart
- GENQ-22461 System, SDI single output doesn't update range and colour by change SDI Multi Out
- GENQ-22097 I/O Conform, convert error by EDL to AAF with certain EDL on Windows10 Rio
- GENQ-22498 MLT FX, Color on SDI changes between Play and Still.
- GENQ-22517 I/O Export, input key is not burned to image by export tif, tga and prores4444 with float clip
- Effects Colour, Only supports Integer Rec.709 colour space clips
- GENQ-22548 I/O Conform, some transitions are ignored by convert from BVE EDL to AAF
- GENQ-22545 Neo Panel, function buttons mapping is broken, if you install tangent panel drive
- GENQ-22544 MLT FX Colour, outside of shape becomes green and magenta by pre-process with YUV clip + source colour processing

- Expected Operation:
  GENQ-22396 MLT FX Colour, soft clip setting doesn't link to "Default YUV Legal Colour State" in F1

- Rio Gateway does not support EXR workflows through the CIFS interface
  Workaround *: Use QXMLNET to transfer EXR files through the Rio Gateway*

- GENQ-21050 MLT FX Colour, image is not updated by change input cascade
- GENQ-21217 MLT FX, crash happens by render SHV clip by float processing
- GENQ-21212 MLT FX, SHV clip becomes green with float processing
- GENQ-21339 MLT FX Colour, curve point has time lag to start moving
- GENQ-21378 MLT FX, process menu jumps by scrub timeline
- GENQ-21402 MLT FX Colour, Pre-process doesn't work to Cineon Log clip with Cineon Log render format + source processing
- GENQ-21408 Video Stretch with Key does not remember it's history
- GENQ-21412 Video Stretch with Key does not show Key result correctly
- GENQ-21381 Respeed, it takes long time to start rendering with long clip
- GENQ-21369 MLT FX Colour, YUV legal doesn't work with YUV 10bit clip composite
- GENQ-21527 Rio Connect, crash by open RioConnect bin with shared raw video clip
- GENQ-21485 DCP In, importing speed becomes much slower than V 4.0.0
- GENQ-21528 DCP Out, generate package process doesn't start with clip has audio and IMF/IMP ON
- GENQ-21523 I/O Import, Crash happens by load mxf generated by DCP OUT
- GENQ-21496 DCP In, IMP ON package colour becomes wrong

- Expected Operation:
  GENQ-21436 MLT FX Tracker, V 4.0.0 Mocha tracker data is changed
  You have to re-create on 4.3

- OFX, overlay doesn't match to effect with desk OFF
- Respeed, Time render result becomes profile one after set profile graph
- Respeed, Keyframe points are not created by Profile Lin In/Out
- HSL fettle curves are affecting image before a colour change has not been applied
- I/O Conform, Scan setting of Respeed mode in Effects is ignored
- Unable to soft mount Imports or Archives that contain closed caption data

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- Closed caption data removed when performing a partial import
- Edit, Data tracks are decoded and viewed at segment resolution
- MLT FX, Data tracks are decoded and viewed at top most layer resolution
- QPlugins, Float clips are rendered in Integer processing and then converted back to float
- DCP In, Colour space not fully supported

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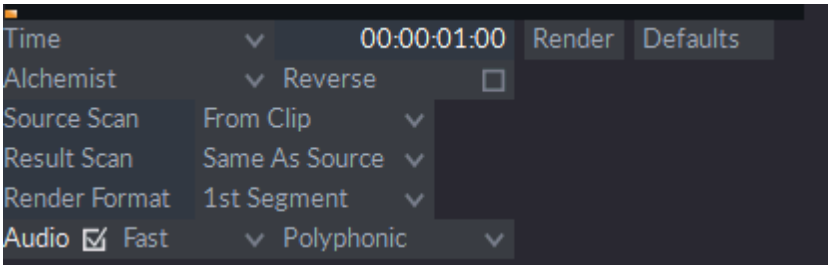
Previous releases

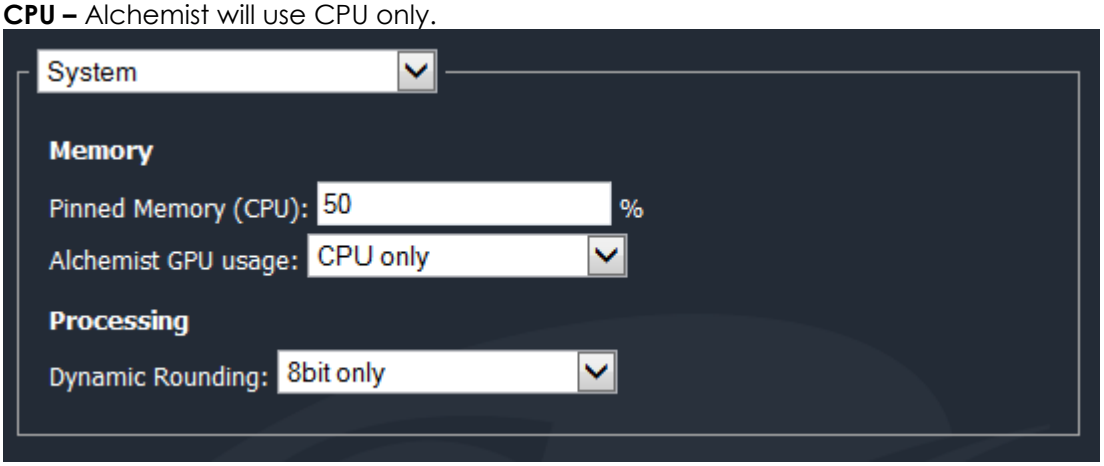
New Features and Enhancements in V 4.4.1 to V 4.4.15

- **Alchemist stretch**

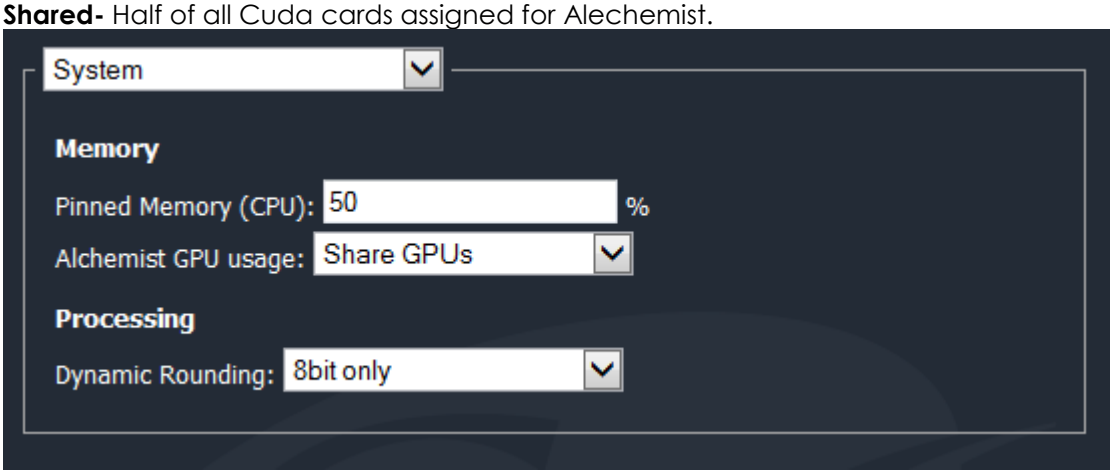


Settings are available in the RIO setting configuration, for CPU or GPU processing.

CPU – Alchemist will use CPU only.



Shared- Half of all Cuda cards assigned for Alechemist.



Note: When 50% of all cards are set for Alchemist, Alchemist can only use a single card so this results in 50% of all additional cards being unused.

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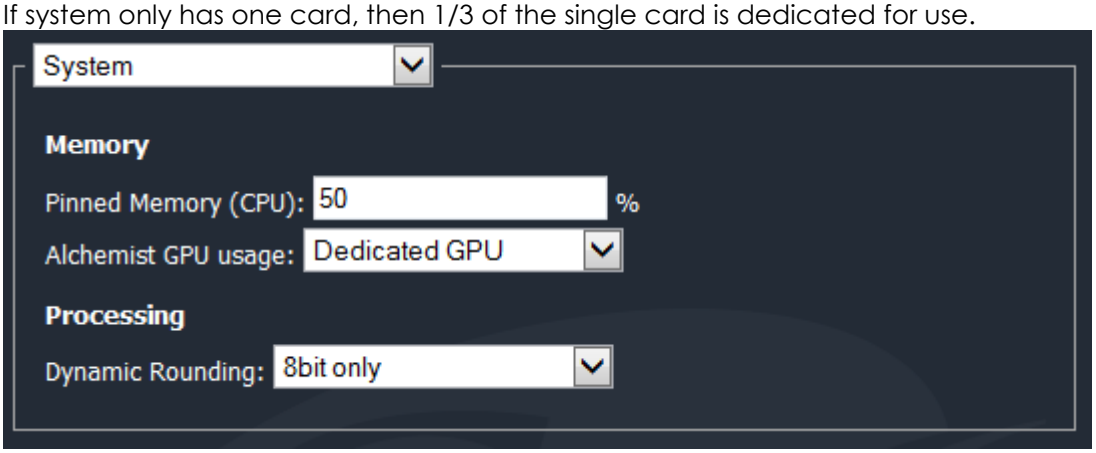
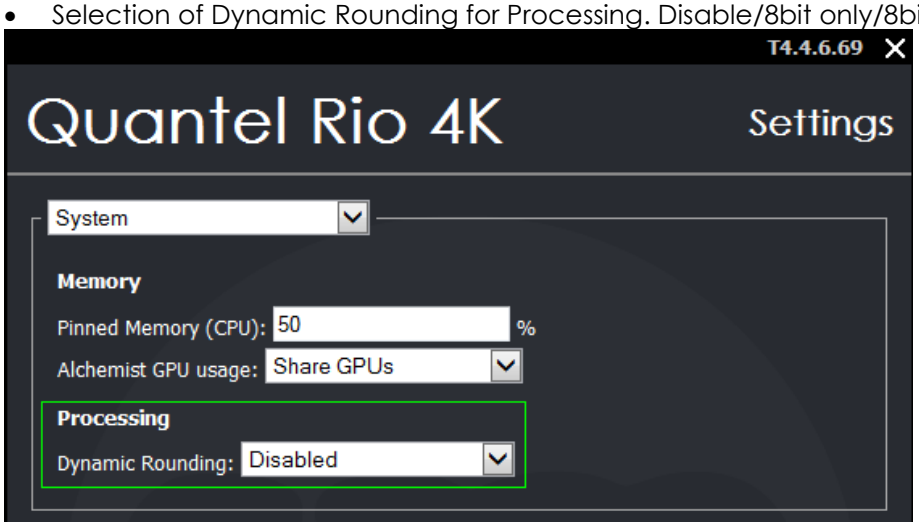
Dedicated GPU– One Cuda card is dedicated for alchemist use.
If system only has one card, then 1/3 of the single card is dedicated for use.

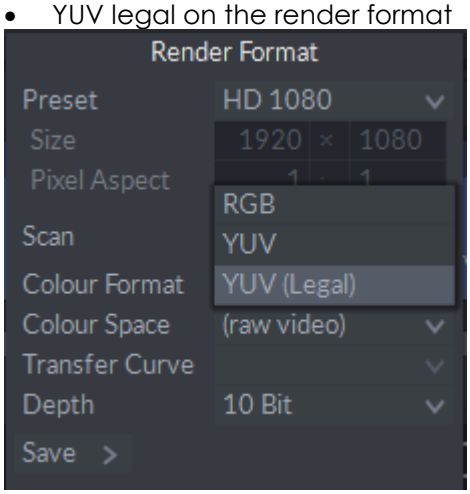


It recommended by GV if Alchemist is not being used that the setting is set to CPU only.

- Rebranding for Grass Valley, a Belden Brand
- Selection of Dynamic Rounding for Processing. Disable/8bit only/8bit and 10bit



- YUV legal on the render format



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New Features and Enhancements in V4.4.0

- Colour space on Export
- Cloud Tracker
- Extended LUT support
- Tangent panel support
- Colour - YUV legal box changes
- Extended 32 channel audio support
- 120p timeline editing support
- Canon v1.5 SDK
- Float clips exported to integer formats

New Features and Enhancements in V4.3.0

- RAW Color workflows – RAW Video/RAW Log
- New transfer curves added. Now available in all menus.
- New Tracker functionality
  - Quick track button
  - Shape homography improvements
  - Keyframe Graph improvements
- Closed Captions Export – Translate 608 into a 708 stream
- Curve is now the default Shape in all menus
- IMF Packaging support via the updated Fraunhofer API
- ProRes Export – added 5.1 channel mapping metadata
- Conform – MXF alpha channel support
- EXR Export – Integer clips will convert to float
- EXR Import – defaults to the size of the display window attribute
- Kernel Automation API (Beta)
- Windows 10 Pro Support

New Features and Enhancements in V4.0.0

- New re-designed user interface
- New respeed option using Alchemist technology
- Improved Flow Motion respeeds
- All respeeds now with full history
- Conform – a choice of respeeds or none at all
- Conform - Avid profiled respeeds supported
- Avid re-link to exported MXF files (round tripping)
- EXR Export – additional compression options
- 12-bit RGB video output
- Ability to change a rush/segment attribute directly on the timeline
- Conform - F1 option to disable SDI
- Avid DNxHR support
- F1 HBR option for MXF files
- Additional transfer curves

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Other Information

Windows 10 support

Rio 4K/8K and Rio Assist now support Windows 10 pro edition

Please note that the Sentinel Driver v7.5.9 is required to use Windows 10
https://sentinel.gemalto.com/sentinel-drivers/
Note the Version required, USB only no need to install parallel:

All Software only and existing Rio systems if upgraded to Windows 10, need to ensure all Windows 10 driver requirements are fully compatible before doing so.

Grass Valley have not fully tested all configurations and commonly used 3rd party cards at this point on Windows 10 pro edition.

This document assumes the Platform is Windows 7. Some drivers for Windows 10 maybe different however Grass Valley will endeavour to document specific cases as and when they arise.

For further information please contact Grass Valley Support Department

https://www.grassvalley.com/support/sam/

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